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DEVELOPMENT OF APPROACHES AND PRACTICES FOR THE SUSTAINABLE USE OF BIOLOGICAL RESOURCES, INCLUDING TOURISM

Note by the Executive Secretary

I. INTRODUCTION

1. In accordance with its programme of work (Annex II of decision IV/16), at its fifth meeting the Conference of the Parties will consider "Sustainable use, including tourism" as one of three themes for in-depth consideration. Accordingly, this note has been prepared by the Executive Secretary for the fourth meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA), in order to assist SBSTTA in its consideration of the development of approaches and practices for the sustainable use of biological resources, including tourism. At this meeting, SBSTTA is focusing on tourism as one example of sustainable use. At its fifth meeting, SBSTTA will broaden the scope of its consideration of sustainable use to cover other activities relevant to the thematic areas so far addressed under the Convention process.

2. In addition, in paragraph 14 of decision IV/15, the Conference of the Parties requested Parties to submit information on current threats to biological diversity from tourism activities; basic approaches, strategies and instruments; the involvement of the private sector, local and indigenous communities; regional and subregional level collaboration; infrastructure planning; and relevant policies and activities.

3. This information gathering is aimed at initiating a process of exchange of experiences, knowledge and best practices, under SBSTTA, in particular at the national

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and regional levels, on sustainable tourism and biological diversity within the framework of the Convention, including consideration of protected areas.

4. In adopting this decision, the Conference of the Parties took note of the Programme for the further implementation of Agenda 21, adopted at the nineteenth special session of the United Nations General Assembly held in June 1997. With regard to sustainable tourism, the General Assembly specifically directed the Commission on Sustainable Development to develop an action-oriented international programme of work to be defined in cooperation with the Conference of the Parties to the Convention on Biological Diversity together with other relevant organizations, including the World Tourism Organization (WTO), the United Nations Conference on Trade and Development (UNCTAD) and the United Nations Environment Programme (UNEP).

5. The Commission on Sustainable Development will address tourism at its seventh session, to be held in April 1999. It is hoped that the biodiversity consideration regarding tourism, which will be developed under the process of the Convention on Biological Diversity, will be fully taken into account under the process of the Commission on Sustainable Development. Equally, SBSTTA may wish to take into account the outcome of the seventh session of the Commission on Sustainable Development in its own consideration of the subject. The Secretariat of the Convention on Biological Diversity will promote cooperation with the Secretariat of the Commission on Sustainable Development in this regard.

6. Two relevant documents have so far been submitted by Germany: "The Berlin Declaration on Biological Diversity and Sustainable Tourism" and "Biological Diversity and Sustainable Tourism - Preparation of Global Guidelines" (UNEP/CBD/COP/4/Inf.21). Two case-studies from Australia, submitted in response to decision III/18 on incentive measures, also address nature-based tourism. To date, the Secretariat has received one submission from the Netherlands based on the request of decision IV/15. The above submissions, together with other relevant existing information, have been utilized in the following analysis.

II. THE ROLE OF TOURISM IN THE SUSTAINABLE USE OF BIOLOGICAL RESOURCES

7. The sustainable use of the components of biological diversity is one of the three objectives of the Convention on Biological Diversity. For the purposes of the Convention, "sustainable use" means the use of components of biological diversity in a way and at a rate that does not lead to the long term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations" (Article 2). This definition of sustainable use is consistent with the concept of sustainable development as elaborated in the Rio Principles and Agenda 21, whereby "sustainable development" meets the needs and aspirations of the current generations without compromising the ability to meet those of future generations. Sustainable development cannot be achieved without the sustainable use of the world's biological resources. The concept of sustainable use is grounded in Article 10 on sustainable use of components of biological diversity and Article 6 on general measures for conservation and sustainable use of the Convention on Biodivesity.

A. Economic importance of tourism

8. Tourism is one of the world's fastest growing industries and the major source of foreign exchange earnings for many developing countries. The receipts from international tourism grew at an average annual rate of 9 per cent for the ten-year period from 1988 to 1997, reaching $443 billion in 1997. Tourist arrivals worldwide increased by 5 per cent per annum on average during the same period[1]. According to WTO, tourism receipts accounted for a little over 8 per cent of total world exports of goods and almost 35 per cent of the total world exports of services in 1997. The breakdown of the travel account balance shows that the industrialized countries as a whole are the net importers of such services, while the developing countries as a whole have been increasing their surplus. The surplus for the latter group of countries widened steadily from $4.6 billion in 1980 to $65.9 billion in 1996, offsetting more than two-thirds of their current account deficit in 1996. The travel surplus has widened steadily in all developing regions in the past decade. Economies in transition recorded a deficit of $3.5 billion in 1995, which swung back to a surplus of $1.5 billion in 1996.

9. From the production point of view, tourism contributes around 1.5 per cent of world gross national product (GNP).[2] Tourism is also a major source of employment, the hotel accommodation sector alone employing around 11.3 million people worldwide.[3] Furthermore, tourism based on the natural environment is a vital and growing segment of the tourism industry, accounting for $260 billion in 1995.[4] In a number of developing countries, tourism has already overtaken cash crop agriculture or mineral extraction as their major source of national income.[5]

B. Tourism and environment

10. The global social, economic and environmental impacts of tourism are immense and highly complex. Given that a high percentage of tourism involves visits to naturally and culturally distinguished sites, generating large amounts of revenue, there are clearly major opportunities for investing in the maintenance and sustainable use of biological resources. At the same time, efforts must be made to minimize the adverse impacts of the tourism industry on biological diversity.

11. Historical observation indicates that self-regulation of the tourism industry for sustainable use of biological resources has only rarely been successful. This is due to a number of factors. Firstly, as there are many individual operators, local environmental conditions may be viewed as a type of common property resource. It will not be in the interests of any individual operator to invest more than his or her competitors in maintaining the general environmental standards in the resort. Similarly, operators are very likely to "export" their adverse environmental impacts,

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1 World Tourism Organization, Tourism Highlights 1997.
2 Report of the Secretary-General on tourism and sustainable development, Addendum: Tourism and economic development, Commission on Sustainable Development, Seventh session, January 1999 (Advance unedited copy).
3 Ibid.
4 Jeffrey McNeely, "Tourism and Biodiversity: a natural partnership", presented at the Symposium on Tourism and Biodiversity, Utrecht, 17 April 1997.
5 Report of the Secretary-General on tourism and sustainable development, Addendum: Tourism and economic development, Commission on Sustainable Development, Seventh session, United Nations, January 1999 (Advance unedited copy).

such as refuse, waste-water and sewage, to parts of the surrounding area unlikely to be visited by tourists. This reaches its most extreme form in so-called "enclave" tourism, where tourists may remain for their entire stay in an artificially maintained environment isolated from its surroundings.

12. Secondly, international tourism operates in an increasingly global market in which investors and tourists have an ever-widening choice of destinations. Indeed the search for new and novel areas and experiences is one of the major engines driving the tourism life-cycle. Moreover, much of the tourism industry is controlled by financial interests located away from tourist destinations. When environmental conditions begin to deteriorate in a given location, operators are likely to shift to alternative locations rather than to invest in improving those conditions.

13. Finally, the international tourism market is fiercely competitive, much of it operating on low profit margins. Operators are therefore often extremely reluctant to absorb any additional costs associated with improving environmental conditions, and instead will often find it economically expedient to shift their area of operation rather than face such costs.

III. POTENTIAL IMPACTS ON BIOLOGICAL DIVERSITY OF TOURISM

14. In considering the role of tourism in the sustainable use of biological resources and their diversity, it is important that the potential adverse impacts of tourism are fully considered. These are roughly divided into environmental impacts and socio-economic impacts, the latter generally being those imposed on local and indigenous communities. Although such impacts on biological resources may be less easy to quantify and analyze systematically, they may be at least as important as, if not more important than, environmental impacts in the long term. Section A addresses the potential adverse impacts on environment, while section B contains the potential socio-economic impacts.

15. Despite the potential negative impacts, and given the fact that tourism generates a large proportion of income and that a growing percentage of tourism is nature-based, tourism does present a significant potential for realizing benefits in terms of the conservation of biological diversity and the sustainable use of its components. Section C addresses the potential benefits of tourism, both tangible and intangible. Among the tangible benefits are direct revenues generated by fees and taxes incurred for the use of biological resources. These revenues can be used for the maintenance of natural areas and the contribution of tourism to economic development, including linkage effects to other related sectors and job creation. Intangible benefits include the education of local communities as well as tourists and potential political leverage.

A. Environmental Impacts

16. *Use of land and resources*: Direct use of natural resources, both renewable and non-renewable, in the provision of tourist facilities is one of the most significant direct impacts of tourism in a given area. Such use may be one-off or may be recurring. The most important are: (i) the use of land for accommodation and other infrastructure provision, including road networks; and (ii) the use of building materials. Strong competition for the use of land between tourism and other sectors results in rising prices, which increase the pressures on, for example, agricultural land. The choice of site is also an important factor. Generally preferred "attractive landscape sites", such as, sandy beaches, lakes and riversides, and mountain tops and slopes, are often transitional zones, normally characterized by species-rich ecosystems. As a result of the construction of buildings in these areas, they are often either destroyed or severely impaired.[6] Deforestation and intensified or unsustainable use of land also cause erosion and loss of biological diversity. Due to lack of more suitable sites for construction of buildings and other infrastructure, coastal wetlands are often drained and filled. Construction of marinas in certain sites can also impact on ecosystems and even coastal coral reefs. In addition, building materials are often extracted in an unsustainable manner from ecosystems. Excessive use of fine sand of beaches, reef limestone and wood can cause severe erosion.[7] Furthermore, creation of congenial conditions for tourists may often entail various forms of environmental manipulation that may have deleterious consequences for biological resources.

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6 Biodiversity and Tourism: Conflicts on the world's seacoasts and strategies for their solution, German Federal Agency for Nature and Conservation ed. , 1997.
7 Ibid.

17. *Impacts on vegetation*: Direct impact on the species composition of vegetation on the ground layer can be caused by trampling and off-road driving. Plant-picking and uprooting by plant collectors and casual flower-pickers can also lead to loss of individual species. Passage of tourism vehicles, particularly in high volumes along popular routes, also has adverse effects on vegetation, resulting in a loss of vegetation cover. Furthermore, forest fires may be caused by the careless use of campfires. The choice of sites for construction facilities can also affect vegetation patterns and species diversity.[8]

18. *Impacts on wildlife*: Wildlife and other types of nature-oriented tourism may have a number of direct impacts on natural resources. The severity of these impacts is variable and has rarely been quantified for any specific cases. Actual or potential impacts include: (i) damage caused by tourism activities and equipment; (ii) increased risk of the spread of pathogens from humans or companion animals to wild species; (iii) increased risk of introduction of alien species; (iv) disturbance of wild species, thereby disrupting normal behaviour and conceivably affecting mortality and reproductive success; (v) alterations in habitats; and (vi) consumption of wildlife by tourists.

19. One of the direct effects on wildlife of specialist tourism is the depletion of local populations of certain species caused by hunting, shooting and fishing. Uneducated divers and tour operators can cause extensive damage to coral reefs through trampling and anchoring. Tourists and tourist transportation means can increase the risk of introducing alien species. In addition, the manner and frequency of human presence can cause disturbance to the behavior of animals, in particular, noise caused by radios, motorboat engines and motor vehicles. Even without much noise, some waterfowl can be agitated by canoes and rowing boats. Construction activities related to tourism can cause enormous alteration to wildlife habitats and ecosystems. Furthermore, increased consumption of wildlife by tourists can affect local wildlife populations and local fisheries as well as the amount available for consumption by local people. Souvenir manufacturing using wildlife, in particular such endangered species as corals and turtle shells, can also seriously affect those populations.

20. *Impacts on mountain environments*: Tourism has been for many years focused on mountain areas, which provide opportunities for hiking, white-water rafting, fly fishing, para-gliding, and winter sports, especially skiing and related activities. Pressures from these activities on biological resources and their diversity are enormous and include: construction of hiking trails, bridges in high mountains, camp sites, chalets and hotels as well as resulting erosion and pollution. There has been increasing awareness of and publicity on the negative effects of tourism on mountains. The Kathmandu Declaration on Mountain Activities was adopted as long ago as 1982 by the International Union of Alpine Associations in order to address these pressures on the fragile mountain ecosystems and to call for improved practices (see section IV. B.). The case- study on the Annapurna Conservation Area project also points out the difficulty in managing increased tourism activities in the fragile mountain ecosystems (see Case Study 3).

21. *Impacts on the marine and coastal environment*: Tourism activities may have

8 Ibid.

major impacts on the marine and coastal environment, the resources they host and the diversity of those resources. Most often, those impacts are due to inaccurate planning and/or lack of education and awareness of the impacts by, for example, tourist resorts along the coastal zones. But sometimes decisions for tourism development are based only on the potential economic benefit, in spite of the known potential damage to the environment, as in the case of various coral reef resorts. Coastal erosion often affects many coastal infrastructures that have been built for tourism purposes. However, it is often those very infrastructures that have altered dune replenishment processes (causing beach erosion), modified local currents by building harbor-like structures (causing, for example, the smothering of superficial corals), and led to eutrophication through inappropriate positioning of the resort sewage systems and the often absent treatment of the water discharged. In open waters, shipping for tourism purposes has sometimes been found to cause pollution due to limited intentional spills, and to carry species into new environments.

22. While the impact of tourism on coastal resources may already be a serious issue, the degradation of these resources may cause the impoverishment of their diversity, as in the case for mangrove ecosystems adjacent to tourist resorts. This may have significant ecological and economic implications for local populations.

23. *Impacts on water resources*: Fresh water, in general, is already facing growing demand from agriculture, industry and households in many parts of the world. In some locations, such as in many small island developing States, additional demand from tourism, which is extremely water-intensive, is an acute problem.[9] The abstraction of groundwater can cause desiccation, resulting in loss of biological diversity. For the quality of water, some activities are potentially more damaging than others. For example, use of motorboats can lead to beach and shoreline erosion, dissemination of aquatic weed nuisances, chemical contamination, and turbulence and turbidity in shallow waters.[10] The disposal of untreated effluents into surrounding rivers and seas can cause eutrophication. It can also introduce a large amount of pathogens into the water body, making it dangerous for swimming. Naturally nutrient-rich ecosystems, such as mangroves, can perform buffer and filtering functions to a certain extent.[11]

24. *Waste management*: Disposal of waste produced by the tourism industry may cause major environmental problems. Such waste can generally be divided into: sewage and waste-water; chemical wastes and pollutants; and solid waste (garbage or rubbish). The effect of direct discharge of untreated sewage leading to eutrophication, oxygen deficit and algal blooms has already been pointed out.

25. *Environmental impact of travel*: Travel to and from international tourist destinations causes significant environmental impacts through pollution and production of "greenhouse" gases. A high proportion of international tourist travel is by air. Such travel is believed to be the most environmentally costly per

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9 Report of the Secretary-General, Addendum, Sustainable tourism development in small island developing States, Commission on Sustainable Development, Fourth session, United Nations, 1996, (E/CN.17/1996/20/Add.3).

10 Tourism, ecotourism, and protected areas, Hector Ceballos -Lascurain, IUCN, 1996.

11 Biodiversity and Tourism: Conflicts on the world's seacoasts and strategies for their solution, German Federal Agency for Nature and Conservation ed. , 1997.

passenger-kilometer, although the true costs are difficult to assess accurately, as are the impacts on biological resources and their diversity.

B. Socio-economic impacts of tourism

26. *Influx of people and related social degradation*: Increased tourism activities can cause an influx of people seeking employment or entrepreneurial opportunities, but who may not be able to find suitable employment. This may cause social degradation, such as local prostitution, drugs and so forth.[12] In addition, due to the unstable nature of international tourism, communities that come to rely heavily on tourism in economic terms are vulnerable to the changes in the flow of tourist arrivals and may face sudden loss of income and job in time of downturn.

27. *Impacts on local communities*: When tourism development occurs, economic benefits are usually unequally distributed amongst members of local communities. There is evidence suggesting that those who benefit are often limited in number and that those who benefit most are often those who were at an economic advantage to begin with, particularly land-owners who can afford the investment. In the case of foreign direct investment, much of the profit may be transferred back to the home country. Therefore, tourism can actually increase inequalities in communities, and thus relative poverty. In addition, tourism increases local demand for goods and services, including food, resulting in higher prices and potentially decreased availability for local people.

28. A more direct example of where tourism may conflict directly with the needs and aspirations of local peoples is where the latter are excluded from particular areas given over to tourism, or at least have their rights of access severely curtailed. This is most likely to occur in protected areas created to conserve wildlife. In most cases, however, the designation of such areas as protected, and the exclusion of local people from them, have preceded the development of tourism in such areas, rather than having been a product of it. On the other hand, as in the case of the Maldives, direct conflict can be avoided by isolating the tourism industry from the bulk of the indigenous population. This isolation has been possible in the Maldives because of the availability of a large number of uninhabited islands that can be developed into tourist resort islands.[13]

29. *Impacts on cultural values*: Tourism has a highly complex impact on cultural values. Tourism activities may lead to intergenerational conflicts through changing aspirations of younger members of communities who may have more contact with, and are more likely to be affected by, the behaviour of tourists. Traditional practices and events may also be influenced by the tourist preferences. This may lead to erosion of traditional practices, including cultural erosion and disruption of traditional lifestyles. Furthermore, they may affect gender relationships through, for example, offering different employment opportunities to men and women.

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12 For further elaboration, see Report of the Secretary-General on tourism and sustainable development, Addendum: Tourism and social development, Commission on Sustainable Development, Seventh session, United Nations, January 1999 (Advance unedited version).

13 Tourism and the Environment Case Studies on Goa, India, and the Maldives, Kalidas Sawkar, Ligia Noronha, Antonio Mascarenhas, O.S. Chauhan, and Simad Saeed, Economic Development Institute of the World Bank, 1998

C. Potential benefits of tourism for the conservation of biological diversity and the sustainable use of its components

(a) Tangible Benefits

30. *Revenue creation for maintenance of natural areas*: The most direct means of exploiting tourism for the sustainable use of biological resources is through the harnessing of some proportion of tourism revenues for that end. This may be achieved either through a generalized environmental tax on tourists or particular tourism activities or by charging fees for access to biological resources, the revenue from which can then be used for their maintenance. The latter procedure generally means charging entrance fees to national parks and other protected areas, but also includes fees for activities, such as fishing, hunting and diving.

31. There are several notable, and evidently expanding, specialist tourism sectors, where participants may be willing to pay such fees. The largest single specialist sector at present is probably bird-watching, although it is not clear whether bird-watchers as a group are in fact any more willing to pay than less specialized tourists. In marine-based wildlife tourism, scuba-diving represents an important specialist sector. The specialist sector which appears to show the highest willingness to pay is sport hunting, where very large license fees can be charged under some circumstances. It must also be recognized that these fees and taxes can also be used as measures to regulate the level of access to concerned sites and biological resources. In addition, the prospect of their continued revenue generation provides a direct incentive for the maintenance of the populations or ecosystems.

32. *Tourism contribution to economic development*: Whether tourists are paying access fees or not, they have a major economic impact on the areas that they visit. Tourist expenditures, in net terms, generate income to the host communities. Tourism also stimulates infrastructure investment, such as construction of buildings, roads, railroads, airports, sewage systems, water treatment facilities and other tourism-related facilities. Tourism generates job opportunities in the sector and offers various related business opportunities derived from tourism. Increasing revenue flows in a region may also allow development of more sustainable land-use practices, by allowing, for example, farmers to use improved rotations and lower level of fertilizer input rather than relying on slash-and-burn cultivation to restore soil fertility through fallow periods. Tourism can also provide a viable economic alternative to unsustainable production or harvesting practices.

33. In some areas, low-input and small-scale agricultural activities that result in both an attractive environment and the maintenance of high levels of biological diversity can also offer an opportunity for tourism. Sale of products (curios and souvenirs) derived from sustainably harvested natural resources may also provide significant opportunities for income generation and employment.

(b) Intangible Benefits

34. *Public education and awareness*: Tourism can serve as a major educational opportunity, increasing knowledge of natural ecosystems and local communities amongst a broad range of people. Such education may be reciprocal. In some parts of the world, local people have become more aware of the unique use of their local biological resources, for example the presence of endemic species, through the advent of tourism.

Tourism can also provide incentives to maintain traditional arts and crafts and opportunities to learn about different cultures. Furthermore, tourism may under some circumstances encourage the maintenance or revitalization of traditional practices that are favourable to the sustainable use of biological resources and that would otherwise be in danger of being lost.

35. *Political leverage*: Where a country has come to depend heavily on international tourism, this may serve as an encouragement to good governance. As international tourists become increasingly well informed and capable of exercising choice in their destinations, perceived deterioration in governance is very likely to deter a significant proportion of tourists from choosing a given country as a destination, because of a mixture of altruistic or moral concern and self-interest. The link between good governance and maintenance of biological resources is neither direct nor explicit, but is undoubtedly of fundamental underlying importance.

IV. MANAGEMENT OPTIONS AND INTERNATIONAL/REGIONAL STRATEGIES FOR SUSTAINABLE TOURISM THAT ADDRESS BIOLOGICAL DIVERSITY

A. Options for good practices

36. *Assessment and monitoring*: It is fundamental that a thorough impact assessment be done before any tourism-related project is started. In assessing the impact of tourism on the sustainable use of biological resources and their diversity, and in attempting to harness the potential benefits of tourism to this end, all the above factors should ideally be taken into consideration. In most circumstances, a comprehensive assessment will not be feasible. Thus decisions will have to be made based on best available information and with a considerable element of judgment. In assessing the impact, tourism carrying capacity for a specific site should also be defined in order to obtain an indication of the limits and limitations of tourism development. It can also assist in planning the types and modes of tourism activities to be developed. The principle of adaptive management is likely to prove useful, where decisions are made on the basis of best available information and then modified in light of the outcomes resulting from those decisions. In order to effectively adjust the activities, a suitable monitoring mechanism should also be installed.

37. *High-value, low-volume tourism*: High-value, low-volume tourism is widely advocated as the best method of maximizing benefits from tourism with less negative impacts on the natural environment. From the experience of protected area management, it is generally accepted that the management costs associated with protected areas, and the pressures on resources, increase in proportion to the number of visitors to a given area. In very unique sites, such as in the Galápagos National Park of Ecuador and in the Parc National des Volcans of Rwanda, this management option can be easily adopted. For example, by the late 1980s, the Parc National des Volcans was charging $170 per visit for gorilla viewing, with the maximum number of visitors per year set at 6,000.[14] Similar high entrance fees are charged at Kilimanjaro and Mount Kenya National Parks and Mount Everest. This may, however, result in the exclusion of local people from accessing these areas.

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14 Economic Perspectives on Nature Tourism, Conservation and Development, Michael P. Wells, Pollution and Environmental Economics Division, the World Bank, 1997.

38. *Optimizing use of tourism revenues*: The problem of making the best use of tourism revenues obtained through protected area entrance fees or other levies is a general one. In government-run protected areas, revenues often accrue to general treasury funds, so that there is no relationship between the income generated from a protected area and the budget available for its management. Where income can be earmarked directly to maintaining that area, there is often a fear that the government funds will be reduced accordingly, so that no additional resources for management will be made available. The problem is further exacerbated by the fact that tourists' willingness to pay may often be dependent upon their understanding of how and where their fees will be used. If there is no clear connection between the fee and the maintenance of the resources that they have come to enjoy, willingness to pay is very likely to be lower than where there is a clear link.

39. Furthermore, in many countries, visitation rates to different protected areas are very unequal, so that some protected areas may receive more entrance fees than are needed to manage them effectively while others do not receive enough. Where protected-area systems can be managed as a whole, and are allowed to make direct use of the income they generate, these problems can be mitigated. This is particularly necessary where these less-visited areas are actually more important for the maintenance of biological diversity.

40. *Channeling the benefit to local people*: An equally complex and important long-term consideration is the establishment of mechanisms that allow local people to benefit from income generated by park fees. Allowing local people to benefit in this way from protected areas is an important step in ensuring the long-term viability of such areas. In regions where local people have been displaced from such areas or have had their usage rights curtailed, such benefits can serve as compensation and reduce hostility to the protected area. Where benefits are tied to responsibilities, this may help to reduce controlled or forbidden activities within the area, such as timber-cutting, cattle-grazing, burning and hunting.

41. In many cases, however, there is a high leakage of tourist revenues away from the local area, and often out of the country entirely. Mechanisms to mitigate this may include preferential allocation of franchises to local people, for example, for accommodation, guides and catering. Such systems require careful, transparent management and an enforceable regulatory regime in cases of abuse. A more radical approach, often appropriate outside the formal protected area system, is the empowerment of local communities to develop and manage their own resources, using controlled tourism as a form of income generation, as in the case of CAMPFIRE (Communal Areas Management Programme for Indigenous Resources) in Zimbabwe.

42. *Maximizing revenues*: Some also suggest that, based on studies on willingness-to-pay, user fees for entry to protected areas can be greatly increased. For example, in the case of Parc National des Volcans in Rwanda cited above, it has been suggested that the fee of $170 per visit for Gorilla viewing could be increased substantially without discouraging visitors owing to the uniqueness of the site. In order to avoid conflicts with local people and to optimize the benefits, differentiated fees can be charged to foreign visitors and to local visitors. One such example is the Monteverde Cloud Forest Biological Reserve in Costa Rica (See Case Study 1).

43. *Private management of Reserves*: Privately-owned protected areas may avoid many of the constraints and difficulties of government-run areas or those on communal lands. In some countries, such areas make a significant and self-financing contribution to the maintenance of some biological resources and their diversity. According to a survey conducted in 1993 among 97 privately-owned Reserves in Latin America and sub-Saharan Africa, of the 32 respondents, more than half reported making a profit. Tourism provided 67 per cent of operation income and private grants accounted for another 19 per cent.[15] In the case of the Monteverde Cloud Forest Reserve, a surplus has been reported every year since 1988 (see Case Study 1). However, their long-term viability often depends on economic conditions beyond the control of the landowner and/or their intentions and acumen, so that the long-term maintenance of these resources is by no means guaranteed.

44. *Tourism in a wider land-use context*: From the foregoing discussion, it becomes evident that while tourism does present many opportunities for the sustainable use of biological resources and their diversity, it also poses many threats to such use. Its potential role is probably best viewed from the perspective of integrated natural resources and land-use management in its widest sense, including integrated coastal zone management. That is, for any given area, an ecosystem approach should be applied in the planning for tourism development and the costs and benefits of its development should be weighed against other options.

45. *Regulatory regimes*: It is extremely likely that, in cases where tourism in some form is considered a viable activity, a regulatory regime will be necessary to minimize adverse environmental and social impacts, for example in the form of zoning, minimum environmental standards or limitation on bed numbers. At a minimum, an environmental impact assessment, including full appraisal of impacts on biological diversity, should be undertaken for every major development. Even then, there will not necessarily be any guarantee that biological diversity will benefit from tourism. Various incentive measures can be formulated to induce activities to become more supportive of conservation and sustainable use of biological diversity. An Australian case study describes some options for the promotion of nature-based tourism (see Case Study 4). The recent report by UNEP on "Ecolabels in the tourism industry" (UNEP IE, 1998) also offers some examples. The development of voluntary environmental codes and standards within the industry, a number of which already exist, should be actively encouraged, as should the education of tourists on the potential environmental impacts of their activities.

B. International and regional strategies and instruments

46. As mentioned above, there have been a number of international and regional agreements and initiatives on sustainable tourism. The document "Biological Diversity and Sustainable Tourism - Preparation of Global Guidelines", submitted for information by Germany to the fourth meeting of the Conference of the Parties as an information document (UNEP/CBD/COP/4/Inf.21), describes a recent development of international initiatives concerning sustainable tourism. Some notable examples are examined here.

47. The "Tourism Bill of Rights and Tourist Codes", adopted at the sixth session

15 M.P. Wells, 1997.

of the General Assembly of the World Tourism Organization, in Sofia, Bulgaria, in 1985, offers a general framework regarding tourism and tourist conduct. The Tourism Bill of Rights established the right of everyone to rest and leisure, the role of States to promote harmonious development of domestic and international tourism, and the role of tourism professionals in contributing positively to the development of tourism as well as the implementation of the Bill. The Tourist Code, for its part, spelled out the code of conduct for tourists.

48. Prior to this Bill, responding to the increasing threats to their fragile ecosystems and the environment, the International Union of Alpine Associations (IUAA) adopted the Kathmandu Declaration on Mountain Activities at its forty-fourth General Assembly in 1982. Identifying the urgent need for effective protection of the mountain environment and landscape, the Declaration called for actions to reduce the negative impact of human activities on mountains and immediate attention for the flora, fauna and natural resources. In addition, it established the cultural heritage and the dignity of the local population as inviolable. It further called for better education and awareness regarding environment and identified the use of appropriate technology for energy needs and the proper disposal of waste as matters of immediate concern.

49. In 1992, guidelines on the development of national parks and protected areas for tourism were jointly published by WTO, UNEP and IUCN[16] in order to encourage more appropriate tourism development in national parks and protected areas. The guideline addresses: 1) ways and means of involving local people living in and around protected areas; 2) determining the appropriate level of tourism in national parks; 3) improving the management of the natural values of the area; 4) designing appropriate tourism infrastructure in national parks; 5) promoting greater appreciation by visitors of the values of national parks; and 6) determining how tourism activity in national parks can serve as a self-financing mechanism for the park and as a tool for conservation. In the same year, UNEP, with the UNESCO World Heritage Center,, organized an International Workshop on the management of tourism in natural world heritage sites. The Workshop's recommendations have been widely circulated and now the two organizations are jointly working on a manual for managers of natural world heritage sites.

50. In 1994, the Council of Europe adopted recommendations for sustainable tourism that contain measures at the national, international, local and regional levels.

51. The World Conference on Sustainable Tourism, which took place in Lanzarote in April 1995, adopted the Charter for Sustainable Tourism, listing 18 points that are essential for sustainable tourism. It established that tourism development would need to be conducted in the framework of sustainable development, addressing the natural, cultural and human environments. It called for special priority in the matter of technical cooperation and financial aid to be given to environmentally and culturally vulnerable spaces.

52. More recently, in 1997, the International Conference of Environment Ministers on Biodiversity and Tourism, held in Berlin, Germany, attended by 19 countries and six organizations, adopted the Berlin Declaration on Biological Diversity and

16 Guidelines: Development of National Parks and Protected Areas for Tourism. WTO UNEPIE/PAC Technical Report Series 13, 1992

Sustainable Tourism. The Declaration largely concentrates on five areas:

- sustainable tourism is a sensible use of biological diversity. In order for sustainable tourism to contribute to the conservation and sustainable use of biological diversity, environmentally sound forms of tourism are to be promoted;
- the development of tourism needs to be controlled in order to ensure sustainability;
- particular attention needs to be paid to tourism in vulnerable areas, including protected areas, coastal and mountain areas, and regions in which nature is particularly diverse;
- not only countries, but all stakeholders are responsible for sustainable development, particularly the private sector, whose voluntary initiatives are encouraged; and
- local communities are not only responsible for the sustainable development of tourism, but they can also gain particular benefits from tourism.

53. At the occasion of the Ministerial Roundtable on Biological Diversity held during the fourth meeting of the Conference of the Parties to the Convention (Bratislava, Slovakia, May 1998), the Ministers discussed the issue of tourism. It was acknowledged that a substantial share of tourism strongly depends upon and affects biological diversity, while on the other hand it was also recognized that sustainable tourism could play a role in poverty alleviation and conservation of biological diversity.

54. A recent Workshop on Marine Biodiversity in the Caribbean, held in Jamaica in October 1998, explored the relationship between tourism and marine biodiversity. A working group devoted to this issue concluded that the pressures on marine biological diversity from tourism require a series of measures, depending on the issue in question:

- from a science, technology and research viewpoint, there is a need to improve the scientific baseline information on which to base policy decisions, and communication should be improved and maintained between researchers and resource users, including tourism;
- there is a need for indicators able to assess the carrying capacity of the system;
- tourism is not integrated enough in national planning, and stakeholder participation is limited. The opposite situation would encourage integration of conservation of marine biological diversity into the tourism industry's long-term planning;
- education and public awareness is a major issue, along with the need for appropriate legislative measures; and
- an important aspect is the use of market forces and economic instruments to stimulate environmentally responsible behaviour.

55. Also in October 1998, the International Conference on "Sustainable Tourism in Small Island Developing States and Other Islands" was held in Lanzarote, Canary Islands, Spain, jointly organized by UNEP and WTO. The Conference addressed the challenges of sustainable tourism in small islands and proposed recommendations include: (a) integration of tourism in the overall plan for sustainable development; (b) stakeholder involvement; (c) involvement of local communities; (d) adoption of alternative technologies; (e) promotion of codes of conduct and ecolabels tailored

for small islands; and (f) establishment of environmental standards and regulations.

56. Furthermore, UNEP has drafted a set of guiding draft principles on sustainable tourism. Following the mandate given by the Governing Council in February 1999, UNEP will start a multi-stakeholder consultation process on these principles.

57. In addition, an initiative has been started in the Netherlands to develop an integrative approach for biodiversity-friendly tourism, focusing on tourists from the Netherlands with a destination abroad. It will take into account the whole chain of activities, such as information from travel agencies, decisions by public to book trips, effects of travelling, possible reductions of negative impacts of accommodation at the destination, and activities undertaken by tourists abroad. The initiative involves all relevant stakeholders from the public and private sectors, following an interactive approach.

C. Case studies

58. Four case studies are presented below in order to highlight some approaches, policies, strategies and instruments experienced in actual cases. The first case study is drawn from the experience of a private Reserve, and describes involvement of the private sector. The second presents an example of initiatives by local communities, also highlighting some potential difficulties faced by these communities. The third presents an example of establishing a partnership between a government and a non-governmental organization. It also highlights the way in which the involvement of a local community has been promoted. Lastly, the fourth case study presents the options for incentive measures to promote nature-based ecotourism.

1. A Private Reserve: Monteverde Cloud Forest Reserve, Costa Rica [17]

59. The Monteverde Cloud Forest contains a number of different habitat types and a wide range of Central American fauna and flora, including around 600 tree species, 300 orchid species, 200 ferns and 100 mammal species. The Reserve originated in a 500 ha plot of forest set aside by American Quakers in the 1950s. In 1973 private donations were used to set up the private Monteverde Cloud Forest Reserve, now operated by the Tropical Science Center in San Jose, which has grown through land acquisition to its current size of 10,500 ha. Visitation levels increased from around 400 per year in the early 1970s to some 13,000 in 1987 and around 50,000 in 1994, at which level it is now fairly stable.

60. The reserve operates a multiple entry pricing policy with the aim of maximising revenues from overseas visitors while ensuring that the reserve remains affordable to as many Costa Ricans as possible. In 1995 charges were: a token fee of less than one US dollar for Costa Rican students; US$1.50 for other Costa Rican nationals and residents; US$4 for foreign students; US$8 for foreigners not on package tours; US$16 for foreigners on package tours. Foreigners accounted for 80 per cent of visitors and 97 per cent of revenues.

61. In 1993 entrance fees accounted for 45 per cent (US$ 376,000) of the total reserve

17 Source: Aylward, B., Allen, K., Echeverría, J. and Tosi, J., Sustainable ecotourism in Costa Rica: the Monteverde Cloud Forest Reserve, *Biodiversity and Conservation,* 5(3): 315-344, 1996.

revenue of US$ 841,000. Other sources of income included guided nature walks, a snack bar, gift store and donations. The Reserve has reportedly generated a surplus every year since 1988. Funds generated from the Reserve have been used to support environmental education programmes. Overall present values of the reserve have been estimated in the order of US$10 million to US$40 million, far exceeding the value of the reserve from any other conceivable form of land use.

2. Local Initiative: Firefly watching in Peninsular Malaysia [18]

62. On localised tidal reaches of the Selangor River in Selangor State, Peninsular Malaysia, large colonies of the firefly *Pteroptyx tener* in the mangrove *Sonneratia caseolaris* flash synchronously, resulting in an exceptionally beautiful and unusual natural phenomenon. In the late 1980s, a partnership between the village boatmen and local conservation organisations was formed. A nearby nature Reserve allowed local people to use their amenities to provide booking facilities and interpretation. Opportunities increased for employment amongst local fishermen and the demand for local restaurants and other tourist facilities. Because the mangroves are sensitive to erosion, villagers agreed amongst themselves not to use power boats. Villagers also became actively involved in maintaining the riverine vegetation which elsewhere is being cleared through land conversion and to improve river access.

63. However, as the scheme has become more and more successful, and tourist arrivals have increased, tensions and difficulties have arisen. The fireflies are by far the largest source of income for the village, but income is very unequally distributed, the chief beneficiaries being families with boatmen working for the company controlling access to the fireflies. Competing groups have started using power boats and efforts to maintain and restore mangrove areas have been suspended. However, the scheme remains under the control of local people who, given time, may be able to resolve their conflicts.

3. A Government-NGO Partnership: The Annapurna Conservation Area Project, Nepal [19]

64. The Annapurna Conservation Area in Nepal covers nearly 7700 square kilometres in an area of very high geographic and cultural diversity. Around 120,000 people, mostly low-income farmers, inhabit the area, which is visited by over 45,000 foreign trekkers annually.

65. Trekking has led to the development of a large number of lodges and teashops along trails, bringing income and employment opportunities into the area. However, it has also led to significant adverse environmental impacts. Forests have been cleared to provide fuel for cooking and heating. Agriculture has expanded into fragile marginal land in order to increase food supply. Water pollution, poor sanitation and litter on trekking routes are the growing problems.

66. Improvement of tourist facilities while safeguarding the environment was initiated by royal directive in 1985. The King Mahendra Trust for Nature Conservation, a local NGO, successfully lobbied to create the Annapurna Conservation Area, gazetted in 1992. The Conservation Area is a multiple-use area, allowing hunting, collection of forest products, use of visitor fees for local development and the delegation of management authority to village level. The Annapurna Conservation Area Project was

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18 Source: Hughes, R. (1997). *Community Wildlife Management Project: Phase I. South East Asia Regional Review Cambodia, Lao PDR and West Malaysia.* IIED, London. Quoted in: Roe, D., Leader-Williams, N. and Dalal-Clayton, B. 1997. *Take only photographs, leave only footprints: the environmental impacts of wildlife tourism.* IIED Wildlife and Development Series No. 10.

19 Source: Brandon, K. 1996. *Ecotourism and Conservation: A Review of Key Issues.* Environment Department Paper 33. The World Bank.

established to help local people retain as much control as possible over their environment and to offer them training on environmental management

67. Since 1989 an entry fee to the Conservation Area, equivalent to $13 in 1996, has been collected from trekkers. Revenues are passed directly to the Annapurna Conservation Area Project; in 1994 (when the fee stood at an equivalent of only $4) these amounted to some $160,000. The project also receives external funding, equivalent to less than $500,000 in its first four years. Funds from entry fees are used for community development projects such as bridge and trail repair, agricultural extension, health clinics, mobile vaccination units, and improving waste disposal and water supplies.

4. Incentive measures: The Wet Tropics World Heritage Area (WHA), Australia [20]

68. Tourism is a major economic activity in the Wet Tropics region of north Queensland, Australia. In 1992, tourism contributed 25 per cent of both Gross Regional Product and employment in the Far North Queensland region (Horwarth and Horwarth, 1993). The WetTropics WHA is the location of 4.77 million visits to different sites for tourism (National Centre for Studies in Travel and Tourism, 1993) and recreation per year (Manidis Roberts, Consultants 1994). Around 50 companies offer regular tours, mainly day trips, to sites in the Wet Tropics WHA. There is virtually no commercial accommodation within the Wet Tropics WHA. A number of camping areas are adjacent to but outside the WHA. Other accommodation facilities are also located outside the WHA, a number of them being promoted as 'ecotourism' facilities.

69. The greatest threat to biodiversity conservation in the Wet Tropics region is clearing of native vegetation on private land, caused by agriculture, urban development and non-nature based tourism. Where nature-based tourism (NBE) can provide a viable return on private land and an alternative to other land uses, clearing may be minimized.

70. Opportunities for NBE to provide viable land-use alternatives and the attractiveness of the schemes to individualland holders are likely to be variable. The uptake and effectiveness of these options for preventing clearing and encouraging stewardship of land is also likely to be variable. Where high priority for biodiversity conservation has been identified, targeted public funding (voluntary buy back, Conservation Management Agreements (CMAs) based on financial or material payments) is likely to be the most effective means of ensuring the outcome desired. The various options for CMAs are all worth pursuing. Those that do not rely on public funding (tradable vegetation rights, increased development rights) could be a useful adjunct to publicly funded schemes. Provision of information to land holders through extension offers a cost-effective means of encouraging effective stewardship of private lands under native vegetation.

71. On public lands, such as those within the Wet Tropics WHA, where the regulatory safety net is extended from reservation of lands to planning and setting limits on use, tradable permits may provide security of access for tour operators and hence an incentive for stewardship of the area. Funding of the management necessary to allow tourism to occur with minimal impact is essential for biodiversity conservation.

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20 Source : Submission from the Government of Australia, regarding decision III/18.

Levying fees, preferably comprehensive ones, on visitors will contribute to funding and free up public funds for other aspects of biodiversity conservation.

V. THE CONVENTION ON BIOLOGICAL DIVERSITY AND SUSTAINABLE TOURISM

72. Tourism development and its effects on sustainable development are concerns of many countries and stakeholders. Codes of conduct, guidelines and declarations on various aspects and of varied scope have been developed. The web-site of the European Community Network for Environmental Travel and Tourism (ECoNETT) lists fifty-seven of them (web-site linked from http://www.wttc.org). UNEP has thoroughly explored the use of codes of conducts[21] and of ecolabels[22] in the tourism sector, highlighting the necessary steps to achieve effective results from their use. There are other regional and global agreements that can provide frameworks to at least some aspects of sustainable tourism. For example, global agreements which are relevant to sustainable tourism, addressing biological diversity, besides the Convention on Biological Diversity, include the Convention on Wetlands, the World Heritage Convention, the Convention on International Trade of Endangered Species and the Convention on Migratory Species. At the regional level, the Regional Seas Programme of UNEP offers a good example.

73. The following paragraphs explain how the Convention on Biological Diversity offers a framework for the development of policy options for sustainable tourism, which would promote the conservation and sustainable use of biological diversity.

74. *Objectives and guiding principles*: The three objectives of the CBD, contained in Article 1, "the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits", provide the overall framework for the development of sustainable tourism. In this regard, it is useful to understand the scope of the third objective to include those benefits arising out of the utilization of biological resources. In addition, the Convention operates with two guiding principles, precautionary approach and the ecosystem approach. The former encourages taking measures when there is a threat of significant reduction or loss of biological diversity without waiting full scientific certainty. The ecosystem approach, on the other hand, encourages addressing matters in a holistic and integrated manner. Formulation of policies for tourism development will also benefit from these guiding principles.

75. *Article 6: General measures for conservation and sustainable use*: This article provides for the development of national strategies, plans or programmes for the conservation and sustainable use of biological diversity and for the integration of those objectives into relevant sectoral or cross-sectoral plans, programmes and policies. Nature and biological diversity represent a major resource of tourism activities. In its development, sustainable tourism should take all necessary measures to ensure the integrity of ecosystems and habitats.

76. *Article 7: Identification and monitoring*: In order to make tourism activities sustainable and to prevent and minimize damage caused by tourism to biological diversity, there is a need to identify processes and activities related to tourism

21 "Environmental Codes of Conduct for Tourism", UNEP IE Technical Report no.29, 1995.
22 "Ecolabels in the Tourism Industry", UNEP IE, 1998.

which have, or are likely to have, significant adverse impacts on the conservation and sustainable use of biological diversity and to monitor their effects. These measures are provided for by Article 7.

77. *Article 8: In-situ conservation*: Article 8 provides for various measures for the purpose of in-situ conservation. It contains provisions for the establishment of protected areas, including the development of guidelines for the selection, establishment and management of such areas. As mentioned above, protected areas can offer good opportunities for the development of sustainable tourism. It also contains a number of provisions for the management of biological resources and ecosystems in-situ. An important aspect of Article 8 is that it contains the provision for the respect, preservation and maintenance of knowledge, innovations and practices of indigenous and local communities. This provision offers the basis for minimizing the social impacts on local communities as well as increasing their involvement in the development of sustainable tourism.

78. *Article 10: Sustainable use of components of biological diversity*: This article can be considered as the basis of sustainable tourism. In addition to the general provisions for the promotion of sustainable use of the components of biological diversity, this article specifically provides for cooperation between the governmental authorities and the private sector in developing methods for sustainable use of biological resources. Sustainable tourism can undoubtedly represent such means.

79. *Article 11: Incentive measures*: Under this article, each Contracting Party is to adopt, as far as possible and as appropriate, economically and socially sound measures that act as incentives for the conservation and sustainable use of biological diversity. As tourism is essentially an economic activity, economic instruments to direct ctivities towards more sustainable paths are useful and cost-effective tools. In addition, social and institutional incentives, such as capacity building and stakeholder participation, can be provided in order to minimize social impacts and strengthen conservation and sustainable use of resources. Improved public awareness can also act as an incentive for sustainable tourism.

80. *Article 13: Public education and awareness*: The education of tour operators and guides on the importance of and the measures required for the conservation of biological diversity is an essential component of the development of sustainable tourism. The general public should also be encouraged to understand these concepts. Article 13 contains provisions to this effect. In addition, it provides for the development of educational and public awareness programmes.

81. *Article 14: Impact assessment and minimizing adverse impacts*: As discussed above, tourism accompanies various threats to the maintenance of biological diversity. The adverse impacts of tourism can only be minimized through thorough environmental and biodiversity impact assessments prior to any project execution. Article 14 provides for the introduction of appropriate procedures requiring environmental impact assessments of proposed projects that are likely to have significant adverse effects on biological diversity. Almost all tourism projects can be considered under this category, and thus require environmental impact assessments. A separate document on environmental impact assessments has been prepared for the fourth meeting of the SBSTTA (UNEP/CBD/SBSTTA/4/10) and review of that document

is also encouraged.

82. *Article 16: Access to and transfer of technology*: In the development of sustainable tourism, the use of environmentally sound technologies in various aspects of its operation should be encouraged. These technologies may include those for waste water treatment, pollution prevention and water and energy saving technologies. Article 16 contains provisions to provide and/or facilitate access to and transfer of technologies that are relevant to the conservation and sustainable use of biological diversity and do not cause significant damage to the environment.

83. *Article 20: Financial resources*: Tourism development, as with any other economic activity, requires funding. In addition to huge infrastructure investment requirements, starting up peripheral businesses also requires financing. The level of funding as well as the types of financing available are important factors for consideration. One study points out that one of the most significant barriers to community involvement in tourism is the lack of affordable financing.[23] Article 20 provides both for improved national financial support and for the provision of new and additional financial resources by the developed country Party to the developing country Party.

84. *Programmes on thematic areas*: In addition to these specific articles of the CBD, a programme of work has been developed for each thematic area so far considered under the CBD process, namely, marine and coastal biological diversity, agricultural biological diversity, forest biological diversity and inland water biological diversity. At the fourth meeting of SBSTTA, a new thematic area, consisting of dryland, Mediterranean, arid, semi-arid, grassland and savannah ecosystems, will be considered. (UNEP/CBD/SBSTTA/4/7) The relevant activities of these work programmes should be reflected in the consideration of sustainable tourism. For example, in the multi-year programme of work for the implementation of the Jakarta Mandate on Marine and Coastal Biological Diversity, the implementation of the integrated marine and coastal area management is included as a programme element. In addition, consideration of coral bleaching and special concerns of small island developing States are also addressed. In the programme of work on agricultural biological diversity, sustainable farming in conformity with ecosystem or integrated land use approach is strongly emphasized. Moreover, the Conference of the Parties endorsed the conclusions of the CSD's 1995 review of the implementation of Agenda 21, which recognized the need for an integrated and multi-disciplinary approach to planning, development and management of land resources (decision III/11, paragraph 14). Agro-tourism could be considered in this regard. Furthermore, the consideration of the development of sustainable tourism should fully reflect the development of the work programme on the implementation of Article 8(j) and related provisions.

VI. RECOMMENDATIONS

85. In accordance with decision IV/15 of the Conference of the Parties, SBSTTA may wish to elaborate, on the basis of this document and the inputs from the Parties at this meeting, a scientific and technical analysis of the interlinkages between tourism and biological diversity and to submit it to consideration by the Conference of the

23 M. P. Wells, 1997.

Parties at its fifth meeting.

86. SBSTTA may wish to recommend to the Conference of the Parties, taking into account the outcome of the seventh session of the Commission on Sustainable Development, that it take initiative in the international programme on sustainable tourism under the CSD process with regard to biological diversity. Attention should be drawn to the fact that by continuing the activities contained in decision IV/15, paragraph 14, SBSTTA can develop and take a lead in:

- identification of tourism activities that may have adverse impacts on biological diversity and monitoring of such activities (subparagraph a);

- development of inventories of measures, policies and strategies that integrate tourism development into the conservation and sustainable use of biological diversity (subparagraphs b and f), taking into account the relevant work under way for incentive measures (Article 11, decision IV/10.A) and environmental impact assessment (Article 14, decision IV/10.C); and

- exchange of information on good practices, highlighting the involvement of the private sector, local and indigenous communities (subparagraph c); the regional and subregional level collaborative efforts (paragraph d); and infrastructure planning and regional and land-use planning for tourism (paragraph e).

87. SBSTTA may also wish to recommend to the Conference of the Parties that it take an active role in the development of measures and activities towards the International Year of Ecotourism, proclaimed to be observed in the year 2002 (A/RES/53/200), in association with the Commission on Sustainable Development.